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New species of *Monodictys* and *Veronaea* from soil in the Yellow River source area, China

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Abstract—Two new species, *Monodictys macrospora* and *Veronaea latispora* found from wetland soil and Gobi soil in Yellow River source area of China are described, illustrated and compared with similar taxa. The type specimens (dried cultures) and living cultures are deposited in the Herbarium of Shandong Agricultural University Plant Pathology (HSAUP). Isotypes are kept in the Herbarium of Institute of Microbiology, Academia Sinica (HMAS).

Key words—dematiaceous hyphomycetes, taxonomy, soil fungi

Introduction

During an investigation of soil dematiaceous hyphomycetes in Yellow River source area, China, two species in the genera *Monodictys* S. Hughes and *Veronaea* Cif. & Montemart. were discovered. Based on their distinctive morphological characteristics they could not be assigned to any of the described species. They are treated as new species and are compared to the most closely related species, *Monodictys chlamydosporoidea* (Liu & Zhang 2007), *M. arxanensis* (Wu & Zhang 2008), *Veronaea parvispora* (Ellis 1976), and *V. musae* (Ellis 1976).

Taxonomy

Monodictys macrospora H.Q. Pan & T.Y. Zhang, **sp. nov.** Fig. 1

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Coloniae in PCA effusae, atrobrunneae vel atrae. Mycelium maximam parten superficiale et aliquot immersum, ex hyphis modice vel atrobrunneis, levibus, septatis, 5–6.5 µm crassis compositum. Conidiophora micronematica, recta vel curvata, pallide brunnea,

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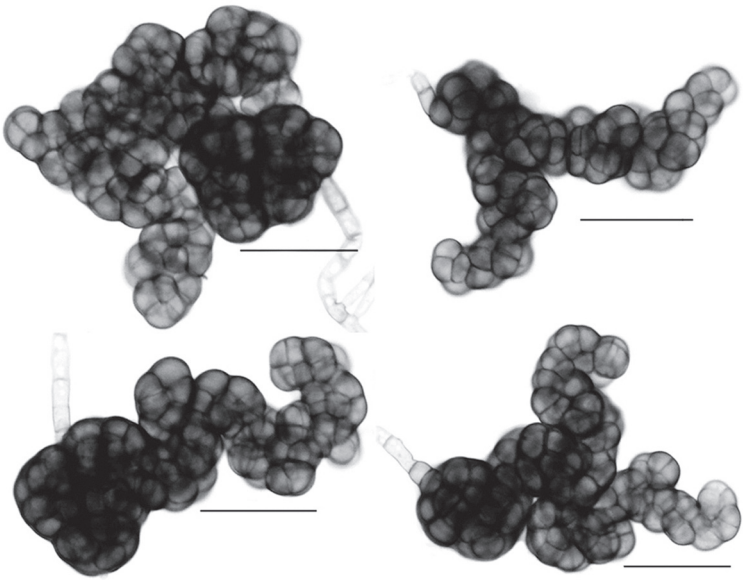

Fig. 1 Conidia and conidiophores of *Monodictys macrospora* (ex holotype; bars = 100 μm)

laevia. Cellulae conidiogenae pallide brunneae, monoblasticae, leaves, determinatae, aliquando inflatae, subglobosae vel cylindricae, 10.5–28.5 μm longae et 6.5–13 μm crassae. Conidia solitaria, acropleurogena, irregularis, ex cellulis globosis numerosis crasse inflatis composite, brunnea vel atrobrunnea, 43–125 × 21–38 μm.

Holotype: isolated from wetland soil, Madoi County, Qinghai Province, China, 24 Jul. 2007, H.Q. Pan, HSAUP II $_{07}$4068, holotype, HMAS196216, isotype.

Etymology: in reference to the large conidia.

Colonies in potato carrot agar medium effuse, dark brown to black. Mycelium mostly superficial. Hyphae moderate brown to dark brown, smooth, septate, branched, 5–6.5 μm wide. Conidiophores micronematous, straight or flexuous, pale brown, smooth. Conidiogenous cells pale brown, monoblastic, smooth, determinate, sometimes inflated, subglobose or cylindrical, 10.5–28.5 μm long, 6.5–13 μm wide. Conidia solitary, acropleurogenous, irregular, comprising numerous globose inflated cells, brown to dark brown, 43–125 × 21–38 μm.

This species is similar to *Monodictys chlamydosporoidea* H.M. Liu & T.Y. Zhang and *Monodictys arxanensis* Y.M. Wu & T.Y. Zhang in conidial morphology. Both *M. chlamydosporoidea* and *M. arxanensis* have smaller conidia; those of *M. chlamydosporoidea* are 23–44 × 17–30 μm and those of *M. arxanensis* are 25–60 × 2–25 μm. These two species also have relatively simple conidia, pale brown colonies, and hyaline conidiophores.

Veronaea latispora H.Q. Pan & T.Y. Zhang, **sp. nov.** Fig. 2

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Coloniae effusae, olivaceae. Conidiophora recta vel leviter curvata, septata, brunnea, laevia, usque ad 90 µm longa, 1.5–2.5 µm crassa, apicem versus cicatricibus conidialibus minutis numerosis praedita. Conidia late obovoidea, subhyalina vel pallide brunnea, laevia, 7.5–9.5 × 3–5 µm.

Holotype: isolated from Gobi soil, Xunhua County, Qinghai Province, China. 24 Aug 2006, H.Q. Pan, HSAUP $II_{06}3223$, holotype; HMAS196217, isotype.

Etymology: in reference to the relatively broad conidia of this species.

Colonies effuse, olivaceous brown. Conidiophores straight or slightly curved, septate, brown, smooth, up to 90 µm long, 1.5–2.5 µm thick, with numerous minute scars at the upper parts. Conidia broadly obovoid, subhyaline to pale brown, smooth, 7.5–9.5 × 3–5 µm.

The most closely related species in conidial morphology to this new taxon are *Veronaea parvispora* M.B. Ellis and *V. musae* M.B. Ellis (Ellis 1976). However, the conidia of *V. parvispora* are much smaller (2–3 × 1.5–2 µm). *Veronaea musae* differs from the new taxon in having narrower conidia (5–10 × 2–3 µm), usually with a minutely papillate base.

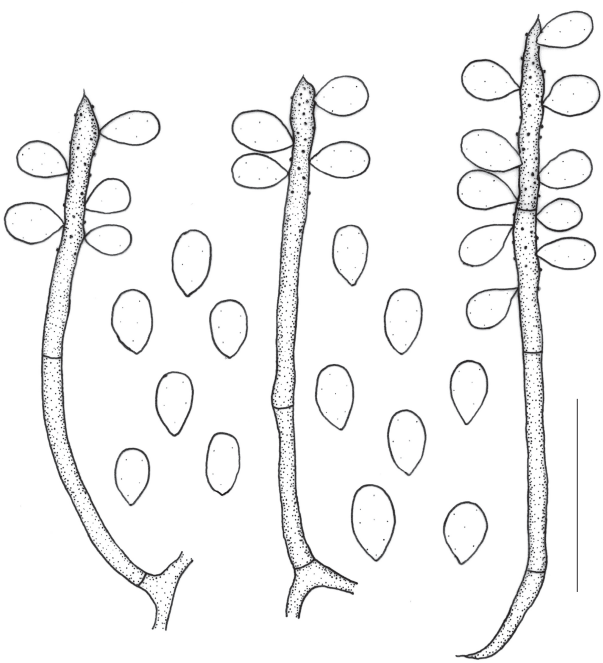

Fig. 2 Conidia and conidiophores of *Veronaea latispora* (ex holotype; bars = 25 µm)

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